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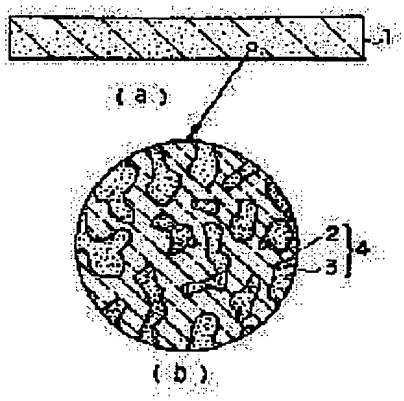
(54) HEAT RADIATING PARTS, ITS MANUFACTURING METHOD, AND SEMICONDUCTOR DEVICE USING IT

(57)Abstract:
PROBLEM TO BE SOLVED: To reduce the weight of heat radiating parts without sacrificing the heat radiating property of the parts nor the matching property of the coefficient of thermal expansion of the parts with that of Si, etc., and, at the same time, to provide a semiconductor package, etc., having a light weight, an excellent heat radiating property, and high reliability.
SOLUTION: When heat radiating parts 1 are constituted of a composite material 4 containing at least one kind of ceramic material 2 selected from among aluminum nitride, silicon nitride, and silicon carbide and metallic copper 3, the composite material 4 is constituted in such a way that the metallic copper 3 is scattered in a matrix composed of the ceramic material 1. It is also possible to form the matrix of a mixture of the ceramic material and tungsten. The parts 1 are used in a semiconductor device, such as the semiconductor package, etc., in a state where a semiconductor element is directly mounted on the parts or the parts are joined to a supporting substrate mounted with the element.



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